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United States Environmental Protection Agency
Region 10, Air & Radiation Division
1200 Sixth Avenue, Suite 155, 15-H13
Seattle, Washington 98101-3188

Permit Number: R10PSD00103
Issued: DRAFT
Effective: DRAFT
AFS Plant I.D. Number: 16-009-00001

Prevention of Significant Deterioration Permit to Construct

Revision No. 3

In accordance with the provisions of Part C to Title I of the Clean Air Act (CAA), 42 USC §§ 7472 to 7492, and 40 CFR Part 52.21, Federal Prevention of Significant Deterioration Program,

PotlatchDeltic Land and Lumber, LLC – St. Maries Complex

is authorized to construct and operate Lumber Kiln No. 6 (LK-6) and the other air pollutant emitting activities described in its application and this permit in accordance with the conditions listed in this permit in the following location:

Location: Coeur d'Alene Reservation
2200 Railroad Avenue
St. Maries, Idaho

Company Contact: Steve Henson, Plant Manager
PotlatchDeltic Land and Lumber, LLC
St. Maries Complex
2200 Railroad Avenue
St. Maries, Idaho 83861
Phone: 208.245.2585, Fax: 208.245.7542
Email: steve.henson@potlatchdeltic.com

Source Contact: Jacob Odekirk, Environmental Manager
PotlatchDeltic Land and Lumber, LLC
St. Maries Complex
2200 Railroad Avenue
St. Maries, Idaho 83861
Phone: 208.245.7503, Fax: 208.245.7542
Email: jacob.odekirk@potlatchdeltic.com

Terms not otherwise defined in this permit have the meaning assigned to them in the referenced statutes and regulations. All terms and conditions of the permit are enforceable by the United States Environmental Protection Agency (EPA) and citizens under the CAA.

Krishna Viswanathan, Director
Air & Radiation Division
U.S. EPA, Region 10

Date

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Permit History

Permit Action Date	Permit Number	Permit Action Description
06/21/2019	R10PSD00100	Original PSD permit for LK-6
10/10/2019	R10PSD00101	Revision No. 1 – revised LK-6 lumber moisture monitoring
10/21/2019	R10PSD00102	Revision No. 2 – corrected a typographical error
draft	R10PSD00103	Revision No. 3 – revised LK-6 temperature limit, LK-6 temperature and moisture monitoring, deviation reporting and source description

1. Source Information and Project Description

The PotlatchDeltic Land and Lumber, LLC (Permittee) St. Maries Complex is part of a larger "stationary source" (as that term is defined by the CAA) that consists of activities at both the St. Maries Complex and the adjacent Lumber Drying Division property. This permit authorizes construction of a new indirect steam-heated batch lumber dry kiln and the emission increases resulting from operation of the kiln and associated existing emission-generating activities at the St. Maries Complex. Table 1-1 lists both the new and existing emission generating activities associated with the proposed major modification to the existing major source.[1]

PotlatchDeltic proposes to construct a batch, dual-track kiln with two side-by-side track systems inside the kiln. The track system is used for moving carts carrying stacks of lumber into and out of the kiln between batch drying cycles. The lumber carried by the carts on a single track inside the kiln is considered one load, so there are two loads (one on each track system) in each batch of lumber dried. A batch drying cycle duration can range from about one day to several days depending upon several factors. The kiln is designed with ten heating zones wherein the drying process can be separately controlled. The length of the kiln is segmented into five cross-sectional areas. The top of each cross-sectional area is one heating zone, and the bottom another. Four thermocouples are employed per zone, and at any one time two thermocouples are measuring the temperature of the air entering the loads (one thermocouple per load) and the other two are measuring the temperature of the air exiting the loads (one thermocouple per load).

SIC Code: 2421 & 2436 Latitude: 47.3231 N Longitude: 116.5856 W

Table 1-1 – Emission Units and Control Devices

EU ID	Emission Unit Description	VOC Control Device
New (Proposed) Emission Generating Activities		
LK-6	Lumber Dry Kiln No. 6. Dual-track, 282,426 board foot per batch, indirect steam-heated lumber dry kiln	None.
Existing Emission Generating Activities		
PB-1	CE Boiler. 43,034 lb steam/hr and 58 mmbtu/hr, fuel cell wet biomass-fired boiler, installed 1964, dutch oven firebox replaced with fuel cells in 1979	None
PB-2	Riley Boiler. 98,000 lb steam/hr and 131 mmbtu/hr, spreader stoker wet biomass-fired boiler with fly ash reinjection, installed 1966	None
PCWR-PM-SH	Exhaust from cyclone (receiving planer shavings) is pneumatically conveyed to baghouse BH-2.	None

[1] Table 1-1 does not list all the emission generating activities at SMC. Namely, SMC's plywood mill and its associated activities are not part of this project.

EU ID	Emission Unit Description	VOC Control Device
PCWR-PM-SD	Planed lumber trimmer, trim ends chipper, breakdown hoist and infeed rolls dust generating activities.	None
PCWR-PM-PTB	Plywood Mill dry veneer chips and fines and Planer Mill trim ends chips pneumatic conveyance to ply trim bin	None
PCWR-PM-PSB	Dust transfer from baghouses BH-2 and BH-3 to planer shavings bin.	None
PCWR-SM-SD	Dust from vertical arbor gang, vertical arbor gang trimmer, quad band mill and edger	None
PCWR-SM-SDB	Sawdust from vertical arbor gang and hog fuel screen pneumatic conveyance to sawdust bin.	None
PCWR-SM-CH	Green chips pneumatically conveyed from sawmill chipper screen to chip bin via cyclone CY-2.	None
BV-2	Building Vent No. 2 exhausts emissions from miscellaneous indoor activities within Sawmill Building	None
BV-3	Building Vent 3 exhausts emissions from miscellaneous indoor activities within Boiler Building	None
DB	Log debarking (22-inch two debarkers; A8 and A5)	None
COS	Log bucking (three cut-off saws)	None
WRD-SH	Wood residue drops into trucks – shavings	None
WRD-CH	Wood residue drops into trucks – chips (all chips assumed green)	None
WRD-SD	Wood residue drops into trucks – sawdust (all sawdust assumed green)	None
WRD-HF	Wood residue drops into trucks & fuel bin – hog fuel	None
HFP	Wind erosion of outdoor hog fuel pile	None

2. General Requirements

2.1 Unless otherwise specified, the terms and conditions of this permit apply to the emission units and control devices/work practices identified in Table 1-1.

2.2 The provisions of this permit are severable, and in the event of any challenge to any portion of this permit or if any portion is held invalid, the remaining permit conditions shall remain valid and in force.

2.3 The Permittee shall comply with all conditions of this permit including emission limitations that apply to the affected emissions units. Noncompliance with any permit term or condition is a violation of the permit and may constitute a violation of the CAA and is grounds for enforcement action and for a permit termination or revocation.

2.4 The permitted source must not cause or contribute to a NAAQS violation; or cause or contribute to a PSD increment violation.

2.5 The permit does not relieve the Permittee of the responsibility to comply fully with applicable provisions of any other requirements under applicable law.

2.6 It is not a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2.7 The permit may be revised, reopened, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and re-issuance or termination or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

2.8 The permit does not convey any property rights of any sort or any exclusive privilege.

2.9 The Permittee shall furnish to Region 10, within a reasonable time as specified by Region 10, any information that Region 10 may request in writing to determine whether cause exists for revising, revoking and reissuing or terminating the permit or to determine compliance with the permit. For any such information claimed to be confidential, the Permittee must also submit a claim of confidentiality in accordance with 40 CFR Part 2, Subpart B.

2.10 Upon presentation of proper credentials, the Permittee must allow a representative of Region 10 to:

2.10.1 Enter upon the premises where the source is located or emissions-related activity is conducted or where records are required to be kept under the conditions of the permit;

2.10.2 Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;

2.10.3 Inspect, during normal business hours or while the source is in operation, any facilities, equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under the permit;

2.10.4 Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

2.10.5 Record any inspection by use of written, electronic, magnetic and photographic media.

2.11 This permit becomes invalid if construction is not commenced within 18 months after the effective date of this permit, if construction is discontinued for 18 months or more, or if construction is not completed within a reasonable time. Region 10 may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between the approved phases of a phased construction project; the Permittee must commence construction of each such phase within 18 months of the projected and approved commencement date.

2.12 If the Permittee does not construct or operate the source or modification in accordance with the application and supporting materials submitted by the Permittee as identified in the Fact Sheet for this permit action and the terms of this PSD permit, the Permittee will be subject to appropriate enforcement action.

2.13 Alternatives to the testing, monitoring, recordkeeping, and reporting required by this permit may be established through the issuance or renewal of a Title V operating permit issued by Region 10 to the Permittee under 40 CFR Part 71, or through a significant modification thereto, provided that the requirements of 40 CFR 52.21 continue to be satisfied and that the Title V permit identifies the provisions of this permit that are no longer in effect.

2.14 EPA may grant an application for rescission for all or a specific portion of this permit if the Permittee submits an application requesting such rescission and shows that 40 CFR 52.21 no longer applies to an emission unit or units subject to this permit.

2.15 Credible Evidence. For the purpose of establishing whether or not the Permittee has violated or is in violation of any requirement of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with applicable requirements if the appropriate performance or reference test or procedure had been performed.

2.16 Certification. Any document required to be submitted under this permit shall be certified by a responsible official, as that term is defined in 40 CFR 71.2, of the Permittee as to truth, accuracy, and completeness. Such certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

2.17 Transfer of Ownership. Prior to any transfer of ownership of the source, the Permittee shall provide a copy of this permit to the new owner(s). In the event of any change in ownership of the source, the Permittee must notify EPA as soon as possible but in no case later than 30 days after the change in ownership is effective. This notification to EPA must specify the date on which ownership was transferred, identify the previous owner, and update the name, street address, mailing address, contact information, and any other information about the ownership and/or operation of the source that will change as a result of the change in ownership. The Permittee shall ensure that the source remains in compliance with this permit during any such transfer of ownership.

2.18 Requirements Apply Upon Initial Startup. Except as required in Condition 5.1, the requirements of this permit apply upon initial startup of lumber kiln LK-6. Initial startup occurs when lumber is dried in LK-6 for the first time.

3. Emission Limitations and Work Practice Requirements

<u>LK-6 Restrictions on Wood Species and Drying Schedules</u>

3.1 The Permittee shall not dry any species of wood other than Grand Fir, White Fir and Western Hemlock in LK-6.

3.2 The Permittee shall not dry any lumber using a drying schedule with a maximum set point temperature of heated air that exits a load of lumber exceeding 245°F.

LK-6 Annual VOC Emission Limit

3.3 LK-6 VOC emissions shall not exceed 50.0 tons per year as determined on an annual basis by calculating the sum of the emissions (tons) for each batch of lumber dried during the calendar year.

3.3.1 VOC emissions (lb/batch) from each batch of lumber dried shall be determined by multiplying the recorded volume of lumber (thousand board feet (mbf)) determined pursuant to Condition 4.1.2 by the batch-specific emission factor (lb/mbf) calculated pursuant to Conditions 3.3.2 and 3.3.3.

3.3.2 For batches of lumber consisting of any amount of Grand Fir or White Fir, each batch's emission factor (lb/mbf) shall be calculated by multiplying the highest 60-minute kiln-wide average dry bulb temperature of the heated air that enters a load of lumber (°F) measured, calculated and recorded pursuant to Condition 4.1.4 by 0.00817 and subtracting 1.02133 from the product.

3.3.3 For batches of lumber consisting exclusively of Western Hemlock, each batch's emission factor (lb/mbf) shall be calculated by multiplying the highest 60-minute kiln-wide average dry bulb temperature of the heated air that enters a load of lumber (°F) measured, calculated and recorded pursuant to Condition 4.1.4 by 0.00369 and subtracting 0.39197 from the product.

3.3.4 VOC emissions shall mean emissions as determined using EPA's Interim VOC Measurement Protocol for the Wood Products Industry – July 2007 (otherwise known as Other Test Method 26, or OTM-26), and includes quantification of the individual contributions of methanol, formaldehyde, acetaldehyde, propionaldehyde, acrolein, phenol, acetic acid and ethanol. Table 3-1 lists the EPA Reference Methods which shall be used in the event VOC source testing is required.

Table 3-1 – Required EPA Reference Methods

Pollutant/Parameter	Test Method	Reference
Port Location/Traverse	Method 1, 1A	40 CFR Part 60, Appendix A
Velocity/Flow	Method 2, 2A, 2C, 2D, 2F, 2G	40 CFR Part 60, Appendix A
Gas Molecular Weight	Method 3, 3A, 3B	40 CFR Part 60, Appendix A
Gas Moisture	Method 4	40 CFR Part 60, Appendix A
Volatile organic compounds	Method 25A	40 CFR Part 60, Appendix A
Methanol	Method 308 or 320	40 CFR Part 63, Appendix A

Pollutant/Parameter	Test Method	Reference
	Method CI/WP-98.01, IM/CAN/WP-99.02 or ISS/FP-A105.01	NCASI
Formaldehyde	Method 316 or 320	40 CFR Part 63, Appendix A
	Method 0011	EPA Publication SW-846
	Method CI/WP-98.01, IM/CAN/WP-99.02 or ISS/FP-A105.01	NCASI
Acetaldehyde	Method 320	40 CFR Part 63, Appendix A
	ISS/FP-A105.01	NCASI
Propionaldehyde	Method 320	40 CFR Part 63, Appendix A
	ISS/FP-A105.01	NCASI
Acrolein	Method 320	40 CFR Part 63, Appendix A
	ISS/FP-A105.01	NCASI
Phenol	Method 320	40 CFR Part 63, Appendix A
	ISS/FP-A105.01	NCASI
Acetic Acid	Method 320	40 CFR Part 63, Appendix A
	ISS/FP-A105.01	NCASI
Ethanol	Method 320	40 CFR Part 63, Appendix A
	ISS/FP-A105.01	NCASI

LK-6 BACT Work Practice Requirements

3.4 The highest 60-minute kiln-wide average dry bulb temperature of heated air that exits a load of lumber as measured, calculated and recorded pursuant to Condition 4.1.5.1 shall not exceed 245°F.

3.5 The Permittee shall take corrective action to return the actual temperature to the set point temperature if the instantaneous dry bulb temperature of heated air that exits any load of lumber in any zone of the kiln as measured pursuant to Condition 4.1.5.2 exceeds the set point temperature in the drying schedule by more than 20°F. This condition applies only when the drying schedule's set point temperature is greater than the ambient (outside) temperature.

3.6 The lowest, average, kiln-wide moisture content for each batch of lumber dried, as measured, calculated and recorded pursuant to Condition 4.1.6, shall not be less than 13%, dry basis.

3.7 The Permittee shall install, operate and maintain a computerized kiln management system to control the entire drying process.

3.8 The Permittee shall develop and implement an operation and maintenance manual for the LK-6 lumber drying kiln to assure good air pollution control practices and efficient operation. At a minimum, the operation and maintenance manual shall address the following elements:

3.8.1 Air temperature measurement systems used in the kiln;

3.8.2 Lumber moisture measurement systems used in the kiln;

3.8.3 Systems for ensuring only allowed species of wood are dried in the kiln;

3.8.4 Sizing and placement of stickers, bolsters and boards;

3.8.5 Door seals and kiln structure integrity;

3.8.6 Kiln vent, baffle and fan systems (including, but not limited to, regular air velocity checks);

3.8.7 Kiln steam system;

3.8.8 Kiln control PC interface system;

3.8.9 Recordkeeping of inspections, maintenance and calibrations including dates and the personnel conducting the work; and

3.8.10 Availability of spare parts.

3.9 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate LK-6 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to EPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

4. Monitoring and Recordkeeping Requirements

4.1 For LK-6, the Permittee shall install, calibrate, operate, and maintain, in accordance with manufacturer specifications, equipment and procedures necessary to measure, calculate and record (including the date and time of measurements or records and, if applicable, the company or entity that performed the analyses and the analytical techniques or methods used) the following for each batch of lumber dried:

4.1.1 The species of wood dried;

4.1.2 The volume of lumber dried per batch (mbf/batch);

4.1.3 The maximum set point temperature (°F) specified in the drying schedule;

4.1.4 The dry bulb temperature of the heated air that enters each load of lumber in each zone of the kiln (°F), continuously measured. For each load of lumber in each zone of the kiln, calculate and record the average temperature every 60 minutes using the temperature data collected by the computerized kiln management

system required by Condition 3.7 over the 60-minute period. Calculate and record a corresponding 60-minute kiln-wide average temperature. Use the highest 60-minute kiln-wide average temperature measured during each batch to calculate the batch's VOC emission factor pursuant to Conditions 3.3.2 and 3.3.3;

4.1.5 The dry bulb temperature of the heated air that exits each load of lumber in each zone of the kiln (°F), continuously measured.

4.1.5.1 For each load of lumber in each zone of the kiln, calculate and record the average temperature every 60 minutes using the temperature data collected by the computerized kiln management system required by Condition 3.7 over the 60-minute period. Calculate and record the 60-minute kiln-wide average temperature using all load-specific, zone-specific 60-minute averages. Use the highest 60-minute kiln-wide average temperature measured during each batch to demonstrate compliance with Condition 3.4;

4.1.5.2 For each load of lumber in each zone of the kiln, calculate the instantaneous temperature differential by subtracting the set point temperature in the drying schedule from the dry bulb temperature of the heated air that exits the load of lumber. Record each temperature differential that exceeds 20°F and the corrective action taken to resolve the exceedance. This condition applies only when the drying schedule's set point temperature is greater than the ambient (outside) temperature.

4.1.6 Beginning the thirteenth hour of each batch's drying cycle, the moisture content (%, dry basis) of a representative sample of boards (minimum of two courses[2]) in each load of lumber at a minimum of four equally-spaced locations (per load) along the length of the load using a capacitance-based in-kiln moisture measurement system, continuously measured. For partial loads, the number of monitoring locations shall be proportional to the load's length (e.g. two monitoring locations for a load spanning half the length of the kiln). Using the manufacturer's computerized kiln management system as required by Condition 3.7, record the management system's calculated average of valid instantaneous measurements from all available locations every 6 minutes. Calculate and record the simple average of valid instantaneous measurements from all available locations at the end of the drying cycle, and prior to equalizing and conditioning (if done), to demonstrate compliance with Condition 3.6.

4.2 The dry bulb temperature and lumber moisture content measurement systems required in Condition 4.1 shall be calibrated at least every six months using the manufacturer's recommended procedures.

[2] A course is a single layer of lumber.

4.3 By February 28 of each year, the Permittee shall calculate and record the prior year's annual VOC emissions (tons/yr) for LK-6 in accordance with Condition 3.3.

4.4 The Permittee shall maintain files of all testing, monitoring and recordkeeping information (including all reports and notifications) and supporting information required by this permit in a form suitable and readily available for expeditious inspection and review. Support information may include all calibration and maintenance records, all original strip-chart recordings or digital records for continuous monitoring instrumentation and copies of all reports required by the permit. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

5. Reporting Requirements

5.1 The Permittee shall notify Region 10:

5.1.1 Of the date construction commences, as defined in 40 CFR 52.21(b)(9), within 30 days after the event;

5.1.2 Of the date construction is completed, within 30 days after the event;

5.1.3 If construction is discontinued for a period of 18 months or more, within 30 days after the period; and

5.1.4 Of the actual date of initial startup, as defined in 40 CFR 60.2, within 15 days after the event.

5.2 The Permittee shall promptly report to Region 10 by telephone (206-553-1331) deviations from permit conditions, including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Reports shall also include the company name, permit number, and permit condition number.

5.2.1 For the purposes of Condition 5.2, deviation means any situation in which an emissions unit fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined by observation or through review of data obtained from any testing, monitoring, or record keeping required by this permit. For a situation lasting more than 24 hours that constitutes a deviation, each 24-hour period is considered a separate deviation. Included in the meaning of deviation are any of the following:

5.2.1.1 A situation where emissions exceed an emission limitation;

5.2.1.2 A situation where process or emissions control device parameter values indicate that an emission limitation or work practice requirement has not been met;

5.2.1.3 A situation in which observations or data collected demonstrate noncompliance with an emission limitation or work practice requirement required by the permit (including indicators of compliance revealed through parameter monitoring); and

5.2.1.4 A situation in which any testing, monitoring, recordkeeping or reporting required by this permit is not performed or not performed as required.

5.2.2 Reports of deviations shall be submitted to EPA based on the following schedule:

5.2.2.1 For emissions of any regulated air pollutant that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours;

5.2.2.2 For deviations of Conditions 3.2, 3.4, 3.5 and 3.6 that continue for more than two hours, the report must be made within 48 hours of the occurrence; or

5.2.2.3 For all other deviations from permit requirements, the deviations shall be reported semi-annually in the annual report required by Condition 5.3 and in a semi-annual report postmarked by August 31 of each year.

5.2.3 Within ten working days of the occurrence of a deviation as provided in Condition 5.2.2.1 and 5.2.2.2, the Permittee shall also submit a written notice, which shall include a narrative description of the deviation and updated information as listed in Condition 5.2, to EPA.

5.3 The Permittee shall submit to EPA annual reports of any monitoring required by this permit. Each report shall include the type and frequency of monitoring performed and a summary of the results obtained by the monitoring. Each report shall be postmarked by February 28 of the following year.

5.3.1 The summary of monitoring performed to satisfy Condition 4.1.5.2 shall include the time and location of the occurrence of each temperature differential that exceeds 20°F and the corrective action taken to resolve the exceedance.

5.4 The operation and maintenance manual required pursuant to Condition 3.8 shall be submitted to EPA within six months after initial startup of lumber kiln LK-6. The Permittee shall review the operation and maintenance manual annually, update it as needed, and submit updates to EPA within 30 days of issuance.

5.5 Unless otherwise specified in this permit, any documents required to be submitted under this permit, including reports, test data, monitoring data, and notifications shall be

submitted to the Region 10 address below. A copy of each document submitted to Region 10 that does not contain confidential business information shall be sent to the Tribal address below.

Original documents go to Region 10 at:	Copies go to Tribe at:
Clean Air Act Compliance Manager U.S. EPA – Region 10, 20-C04 1200 Sixth Avenue, Suite 155 Seattle, WA 98101-3188	Air Quality Manager Coeur d'Alene Tribe P.O. Box 408 Plummer, ID 83851-0408

6. Abbreviations and Acronyms

bf	Board feet
CAA	Clean Air Act [42 U.S.C. section 7401 et seq.]
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency (also U.S. EPA)
EU ID	Emission unit identification
F	Fahrenheit
hr	Hour
lb	Pound (lbs = pounds)
m	Thousand
mm	Million
NAAQS	National Ambient Air Quality Standards
NCASI	National Council for Air and Stream Improvement
No.	Number
PSD	Prevention of significant deterioration
Region 10	U.S. EPA, Region 10
SIC	Standard Industrial Code
VOC	Volatile organic compound